UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
2194	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/924,136	SCHWALB, EDDIE M.
	Examiner	Art Unit	
	Nathan Price	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 August 2001 and 27 October 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>10/27/2003</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 1 – 21 are pending.

Drawings

2.   The drawings are objected to because the specification refers to the PSIP

database 26 of figure 2, but object 26 in figure 2 is labeled "PIP DATA." It is believed

that the applicant intended to label object 26 in figure 2 as "PSIP DATA." Also, the

specification states that step 910 in figure 9 is an "HTTP-Request" and step 910 in

figure 9 is labeled as an "HTTP-RESPONSE." It is believed that the applicant intended

to label step 910 in figure 9 as an "HTTP-Request." Corrected drawing sheets in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the

appropriate figure must be removed from the replacement sheet, and where necessary,

the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement

sheets may be necessary to show the renumbering of the remaining figures. Each

drawing sheet submitted after the filing date of an application must be labeled in the top

margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

3.   Figure 7 should be designated by a legend such as --Prior Art-- because only

that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

4.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show

every feature of the invention specified in the claims. Therefore, the event text table in

the table hierarchy and DOM tree must be shown or the feature(s) canceled from the

claim(s). No new matter should be entered.

5.   Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next

Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6.   Claim 4 is objected to because of the following informalities: claim 4 refers to "a

display device coupled to the output device." It is believed that the applicant intended to

state "the output display" and has been treated as such for the remainder of this office

action. Appropriate correction is required.

7.   Claim 5 is objected to because of the following informalities: claim 5 states,

"...tag includes and associated unique...." It is believed that the applicant intended to

state, "...tag includes an associated unique..." and has been treated as such for the

remainder of this office action. Appropriate corrections are required.

8.   Claim 16 objected to because of the following informalities: the claim states

"Document Object Mode". It is believed that the applicant intended to state "Document

Object Model" and will be treated as such for the remainder of this office action.

Appropriate correction is required.

9.   Claim 19 is objected to because of the following informalities: there is a lack of

antecedent basis for "the output device." It is believed that the applicant intended to

state "an output device" and will be treated as such for the remainder of this office

action. Appropriate correction is required.

10.   Claim 20 is objected to because of the following informalities: claim 20 states,

"...tag includes and associated unique...." It is believed that the applicant intended to

state, "...tag includes an associated unique..." and has been treated as such for the

remainder of this office action. Appropriate correction is required.

Claim Rejections - 35 USC § 112

11.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

12.   Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Claim 5 is dependent on claim 2. However, there is a lack of

antecedent basis for "the tag" of claim 5 if it is dependent on claim 2. It is believed that

the applicant intended to state that claim 5 is dependent on claim 3 and has been

treated as such for the remainder of this office action.

13.   Claims 17 – 21 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. Claims 17 – 19 and 21 are dependent on claims that

are systems. However, claims 17 – 19 and 21 refer to the "apparatus" of the claim on

which each is dependent. Claim 20 inherits this deficiency from claim 18. It is believed

that the applicant intended to claim a "system" and not an "apparatus" in claims 17 – 21

and the claims have been treated as such for the remainder of this office action.

Claim Rejections - 35 USC § 102

14.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15.   Claims 1 and 3 – 7 are rejected under 35 U.S.C. 102(b) as being anticipated by

Wugofski (Wugofski, Ted. "A Modular Hypertext Markup Language for Broadcast

Applications," 1 October 1998, Draft #4, Over the Moon Productions / Gateway,

<http://xml.coverpages.org/bhtml-4.html>).

16.   As to claim 1, Wugofski discloses an apparatus for use within a DTV Application

Software Environment (DASE), comprising:

       an output display (section 4.19, paragraph 4);

       a user input device (section 4.2, under "Visiting a linked resource" paragraph 1);

and

       a renderer (section 4.13.1), coupled to the output display (section 4.19,

paragraph 4) and the user input device (section 4.2 under "Visiting a linked resource"

paragraph 1), that receives video, audio and data signals having embedded therein

declarative applications (section 1.1, paragraphs 1 and 3), which are accessible by the

renderer through declarative Application Program Interfaces (APIs) (section 1.1,

paragraph 3), thereby enabling HTML pages to discover dynamically-linked content and

services found within the apparatus and to be displayed on the output display (section

4.2, "Visiting a linked resource" paragraph 1).

17.   As to claim 3, Wugofski discloses the apparatus according to claim 1 wherein

each API comprises a tag having semantics to enable HTML pages to discover the

dynamically-linked content and services (section 4.2, "Visiting a linked resource"

paragraph 1 and first example code).

18.   As to claim 4, Wugofski discloses the apparatus according to claim 1 wherein the

renderer further interprets broadcast information received through the data signals for

display on the output display (Appendix H: bHTML and the Java Media Framework,

paragraph 1).

19.   As to claim 5, Wugofski discloses the apparatus according to claim 3 wherein the

tag includes an associated unique identification value to access content (section 4.2

"href" attribute).

20.   As to claim 6, Wugofski discloses the apparatus according to claim 1 wherein the

content can be generated based on user-inputs (section 4.2, "Visiting a linked

resource," paragraph 1; and section 6.3 paragraph 4).

21.   As to claim 7, Wugofski discloses the apparatus according to claim 1 wherein the

renderer searches for a primary content or service defined within the API or a

secondary content or service defined within the API should the primary content or

service be unavailable (section 4.19, paragraph 2).

Claim Rejections - 35 USC § 103

22.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

23.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wugofski

in view of A90 (Advanced Television Systems Committee, "ATSC Data Broadcast

Standard." Doc. A/90, 26 July 2000).

24.   As to claim 2, Wugofski discloses the apparatus according to claim 1 and

provides access to documents through links (section 4.11 "Link Types" paragraph 2).

Wugofski fails to specifically teach APIs enabling access to Program System

Information Protocol (PSIP) data.

25.   A90 discloses that the Program System Information Protocol (PSIP) standard is

used to describe system information and program data (section 11.1). In order for the

PSIP to serve a purpose, such as providing program guide data, there must be an

ability to access the data stored in the PSIP.

26.   It would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention to combine these teachings because both disclosures address

issues in digital television. Also, Wugofski describes events in which a channel is

selected (appendix G.3, "onchannelselect") and also recognizes that PSIP can be used

with the disclosed technology (appendix G.3, "oneventstart").

27.   Claims 8 – 10 and 12 – 13 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wugofski in view of A90 and Dolan (Dolan, Michael A. "Report on

Television Data Applications," NIST GCR 01-818, 1 July 2001).

28.   As to claim 8, Wugofski discloses substantially the method within a Digital TV

Application Software Environment (DASE), comprising:

        mapping the at least one XDML document (XDML addressed below) to a

Document Object Model (DOM) structure (section 6.2, paragraph 3), the XDML

document having at least one atomic element defined as a "tag" and the DOM

having an atomic element defined as a "node;"

        defining a condition within the node (Appendix E.1, "public boolean

hasChildNodes();");

        upon satisfaction of the condition, realizing an action defined by the at

least one tag, which action is found within the PSIP data (PSIP addressed in

rejection of claim 3. Realizing an action: section 4.19, paragraph 2 and section

6.2 paragraph 3);

        otherwise, realizing an action defined by the node (section 4.19,

paragraph 2 and section 6.2 paragraph 3).

29.   The "tag" is an inherent feature to XDML and the "node" is an inherent feature to

DOM's. Wugofski fails to specifically disclose access to PSIP data stored within at least

one XDML document. Accessing PSIP data was addressed in the rejection of claim 3

above. Dolan states that the ATSC is working on a standard for a DASE system (page

30 paragraph 2) and will use XDML (XHTML 1.0 Traditional and Frameset subsets)

(page 30 list of web technology used). It would have been obvious to one of ordinary

skill at the time of the applicant's invention to combine Dolan's disclosure with

Wugofski's disclosure because both describe DASE systems. Also, XDML builds on

xHTML (Dolan, page 30 first item in list) and Wugofski uses xHTML in his disclosure.

30.   As to claim 9, the method according to claim 8 is rejected for the reasons above,

which also addresses the use of XDML. Wugofski also teaches rendering based on the

realized action (section 4.2 "Internationalization and links" paragraph 3; section 11.5

paragraph 11).

31.   As to claim 10, the method according to claim 8 is rejected for the reasons

above. A90 also discloses the mapping step comprising identifying all table locations

via a master guide table (page 47 paragraph 5 and figure 11.1), which further comprises

at least one event information table (figure 11.1), at least one event text table having a

plurality of events listed therein (page 50, Extended Text Table), each event defined by

a unique event ID (page 50, paragraph 1), and at least one virtual channel table having

a plurality of virtual channels defined therein (figure 11.1), each virtual channel defined

by a unique source ID within the virtual channel tables (page 48 and figure 11.1,

"source_id").

32.   As to claim 12, the method according to claim 8 is rejected for the reasons

above. Wugofski also discloses the step of rendering the realized action for display on

a display device (section 4.19 paragraph 4).

33.   As to claim 13, the method according to claim 8 is rejected for the reasons

above. Wugofski also discloses the step of automatically and dynamically updating all

referenced actions (4.13.2, Persistent objects).

34.   Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Wugofski, A90 and Dolan as applied to claims 8 and 10 above, and further in view of

Burkett et al. (US 6,635,089).

35.   As to claim 11, the method according to claim 10 is rejected for the reasons

above. Burkett et al. disclose a method comprising the steps of:

        defining an object class for each table type identified (col. 7 lines 28 – 32 and col.

8 lines 15 – 17);

        parsing each table (col. 8 lines 55 – 57);

        for each parsed table, constructing an object instance (col. 8 lines 15 – 17);

        generating a DOM root document object (col. 8 lines 47 – 49);

        adding child nodes of the DOM root document object (col. 8 lines 49 – 53);

36.   Implementing the disclosure of Burkett et al. using object oriented programming

(col. 7 lines 28 – 32) would likely involve the defining of object classes. Burkett et al. fail

to specify that the objects being parsed are tables from a PSIP and therefore also fail to

specify the types of objects that make up the parent and child nodes and the use of

ID's. Burkett et al. state that objects other than those in their disclosure can be used

(col. 8 lines 15 – 17), which can include the tables from a PSIP.

37.   A90 discloses the hierarchy of the tables in a PSIP (figure 11.1). Event

Information Tables can be identified based on the source_id (figure 11.1) and event_id

(page 50 paragraphs 1 and 2). It would have been obvious to one of ordinary skill in the

art at the time of the applicant's invention that the parsing and tree generation disclosed

by Burkett et al. would be an appropriate way to implement a system that includes a

PSIP In order to preserve the hierarchy.

38.   Claims 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Wugofski, A90 and Eyer et al. (US 5,982,445).

39.   As to claim 14, Wugofski discloses a system that receives DASE-compatible

broadcast streams containing video, audio, or data components, or any combination

thereof, and renders the component(s) in a manner useful to an end user (section 1.1

The DTV Application Software Environment), comprising:

means for enabling declarative applications found within the broadcast streams

to access data bases and locate a desired service found therein related to the services

provided by the system (section 6.2, "Linking in response to an event").

40.   Wugofski fails to specify a plurality of smart cards or that a PSIP data base is

present and storing service information.

41.   A90 discloses the use of PSIP (section 11.1, paragraph 1). It would have been

obvious to one of ordinary skill in the art at the time of the applicant's invention to use

the PSIP to store data and have it be accessible with Wugofski's disclosure because

both provide services for digital television. Both Wugofski and A90 fail to specify the

use of smart cards.

42.   Eyer et al. disclose the use of smart cards in a television environment to store

data (col. 9, lines 27 – 30). It would have been obvious to one of ordinary skill in the art

at the time of the applicant's invention to combine these disclosures because all three

operate in a television environment that includes more sophisticated features

(interpretation of markup languages) than simply receiving and displaying audio and

video broadcasts. Inclusion of smart cards would only be useful if they were accessible

and information about them was also stored and accessible.

43.   As to claim 21, the system according to claim 14 is rejected for the reasons

above. Wugofski also discloses a system wherein the content can be generated based

on user-inputs (section 4.2, "Visiting a linked resource," paragraph 1).

44.   Claims 15 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wugofski, A90 and Eyer et al. as applied to claim 14 above, and further in view of

Dolan.

45.   As to claim 15, the system according to claim 14 is rejected for the reasons

above, which includes accessing the service information of either a smart card or of the

system.

46.   The references fail to specify the use of XDML. Dolan states that the ATSC is

working on a standard for a DASE system (page 30 paragraph 2) and discloses the use

of XDML (XHTML 1.0 Traditional and Frameset subsets) (page 30 list of web

technology used). It would have been obvious to one of ordinary skill at the time of the

applicant's invention to combine Dolan's disclosure with Wugofski's disclosure because

both describe DASE systems. Also, XDML builds on xHTML (Dolan, page 30 first item

in list) and Wugofski uses xHTML in his disclosure.

47.   As to claim 16, the system according to claim 14 is rejected for the reasons

above. Wugofski also discloses a means for mapping declarative applications to a

Document Object Model (DOM) (section 6.2 paragraph 1), which is used to enable

JavaScript access to a data base (section 6.1 paragraph 1 and section 6.2 paragraph

1).

48.   Wugofski fails to specify the use of XDML, (see the rejection of claim 15), and

fails to specify accessing the PSIP database, (see the rejection of claim 14). Both

shortcomings have been addressed in previous claim rejections.

49.   As to claim 17, the system according to claim 15 is rejected for the reasons

above. A90 discloses that the Program System Information Protocol (PSIP) standard is

used to describe system information and program data (section 11.1). In order for the

PSIP to serve a purpose, such as providing program guide data, there must be an

ability to access the data stored in the PSIP.

50.   As to claim 18, the system according to claim 15 is rejected for the reasons

above. Wugofski also discloses each API comprising a tag having semantics to enable

HTML pages to discover the dynamically-linked content and services (section 4.2,

"Visiting a linked resource" paragraph 1 and first example code).

51.   As to claim 19, the system according to claim 15 is rejected for the reasons

above. Wugofski also discloses a system wherein the renderer interprets broadcast

information received through the data signals for display on the output display

(Appendix H: bHTML and the Java Media Framework, paragraph 1).

52.   As to claim 20, the system according to claim 18 is rejected for the reasons

above. Wugofski also discloses a system wherein the tag includes an associated

unique identification value to access content (section 4.2 "href" attribute).

Conclusion

53.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Sezan et al (US 6,236,395 B1) disclose the use of smart cards and a PSIP in a

digital television environment.

54.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nathan Price whose telephone number is (571) 272-

4196. The examiner can normally be reached on 7:30am - 4:00pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Thomson can be reached on (571) 272-3718. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free).

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